

Amendments to the Claims

The listing of claims will replace the previous version, and the listing of claims:

Listing of Claims

1. (previously presented) A document transport apparatus for an image reading apparatus with a platen comprising:

a sheet feeding tray, and a sheet discharging tray,

sheet feeding means for drawing a document from the sheet feeding tray, said sheet feeding means being disposed at one side of the document transport apparatus,

transport means, disposed adjacent to the sheet feeding means, for receiving the document from the sheet feeding means and transporting the document to a predetermined position on the platen of the image reading apparatus,

sheet discharging means disposed adjacent to the transport means at a side opposite to the sheet feeding means and located at the other side of the document transport apparatus, said sheet discharging means discharging the document to the sheet discharging tray after the document is read at the platen,

a switch back path disposed adjacent to the sheet discharging means and located between the transport means and the sheet discharging tray, said switch back path turning the document upside down, reversing a leading end and a trailing end of the document, and guiding the document to the sheet discharging means while turning the document upside down again, and

a sheet discharging path, disposed adjacent to the sheet discharging means, for turning the document upside down and guiding the document to the sheet discharging means without reversing the leading and trailing ends of the document.

2. (original) A document transport apparatus according to claim 1, further comprising control means electrically connected to the transport means and the sheet discharging means, said control means controlling the transport means and the sheet discharging means such that the document after one side thereof has been read is transported to the switch back path, and the document is transported again from the switch back path to the predetermined position on the platen through the sheet discharging path.

3. (original) A document transport apparatus according to claim 2, wherein said sheet discharging means discharges the document to the sheet discharging tray located below the sheet feeding tray and above the platen.

4. (previously presented) A document transport apparatus according to claim 2, wherein said control means controls the transport means and the sheet discharging means such that the document is discharged to the sheet discharging tray via the sheet discharging path after the document is transported from the switch back path to the predetermined position on the platen through the sheet discharging path and after the document is read.

5. (original) A document transport apparatus according to claim 2, further comprising a guide member disposed at a discharge side of the platen, said guide member being positioned below the platen when the document is transported from the platen and above the platen when the document is transported to the platen, and switching means connected to the guide member for switching a position of the guide member according to a direction that the document is transported.

6. (original) A document transport apparatus according to claim 5, wherein said switching means includes a torque limiter disposed on a driving shaft of a transporting roller.

7. (previously presented) A document transport apparatus according to claim 1, wherein said sheet discharging means includes a pair of sheet discharging rollers capable of rotating in forward and reverse directions for discharging the document to the sheet discharging tray or transporting the document to the platen, and said discharging path is located between the platen and the pair of sheet discharging rollers and branched from the switch back path.

8. (previously presented) A document transport method comprising:

drawing a document from a sheet feeding tray in a condition such that one edge of the document becomes a leading edge,

transporting the document directly to a predetermined position on a platen in a condition such that said one edge of the document is said leading edge,

guiding the document after one side thereof is read to a switch back path, said switch back path turning the document upside down, and reversing a leading end and a trailing end of the document,

transporting the document from the switch back path toward a sheet discharging tray,

changing a transporting direction of the document before the document is completely discharged to the sheet discharging tray,

guiding the document that the transporting direction is changed to a U turn path to transport the document to the predetermined position on the platen again,

transporting the document to the U turn path after the other side of the document is read, and

discharging the document to the sheet discharging tray.

9. (cancelled)

10. (original) An image reading apparatus comprising the document transport apparatus according to claim 1, the platen for placing the document, and reading means for reading the document placed on the platen.

11. (previously presented) An image reading apparatus according to claim 10, wherein said control means controls the transport means and the sheet discharging means such that the document is discharged to the sheet discharging tray via the sheet discharging path after the document is transported from the switch back path to the predetermined position on the platen through the sheet discharging path and after the document is read.

12. (previously presented) A document transport apparatus according to claim 1, wherein said switch back path includes a first portion extending to a portion adjacent to the transport means for receiving the document transferred by the transport means, a second portion extending toward the sheet discharge path, and a gap disposed between the first and second portions.

13. (previously presented) A document transport apparatus according to claim 12, wherein said sheet discharging path includes a U turn path connecting the first and second portions without passing the gap.

14. (previously presented) A document transport method according to claim 8, wherein said switch back path includes a gap so that the document sent into the gap in one direction is sent out in a direction opposite to said one direction.

15. (cancelled)